UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,351	12/04/2007	Ju Hyun Ban	05-616-B	9656

20306   7590   02/18/2009
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

EXAMINER
GU, YU

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
02/18/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _19 December 2005_.

2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-5_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-5_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _19 December 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-5 are presented for examination.

Priority

2.   Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). A certified copy has been filed with the application on 7/24/03.

Claim Objections

Claims 1 and 3 are objected to because of the following informalities: claim 1

and 3 does not end with a period mark. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

3.   **Claims 1-5** are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 1 recites the limitation *"Block of Base Station Status Management (BBSM)"*,

"Block of Digital unit Control and management (BDCC)" and *"Block of RF Control*

(BRFC)", which are components of a CDMA-2000 system as recited in said claim.

However, the Applicant's disclosure contains no sufficient description as to the (physical

or logical) structure of these components. The Examiner holds that said claim fails to

distinctly point out Applicant's invention. For the purpose of this examination, the

Examiner interprets above limitations to the broadest extent in accordance with their

functional description. **Claims 2-4** contain all limitations of claim **1** by virtue of

dependency, and therefore are consequently rejected.

Claim 5 likewise recites limitations "BBSM", "BDCC" and "BRFC" as system component

without description of their physical or logical structure. The Examiner holds that said

claim fails to distinctly point out Applicant's invention. For the purpose of this

examination, the Examiner interprets above limitations to the broadest extent in

accordance with their functional description.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   **Claims 1, 3 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable

over US 6041228 Niska et al. (hereinafter Niska).

Regarding **claim 1**, Niska discloses a *method for automatically setting a frequency of a*

base station in a CDMA system (Niska does not specifically disclose the CDMA system

as conforming to the CDMA-2000 standard, however, it would have been obvious to a

person of ordinary skill in the art to apply Niska's teaching to a CDMA-2000 system in

order benefit from Nisak's advantages, see at least column 3 lines 41-58 and column 5

lines 8-12), *the system comprising:*

- *a Block of Base station Status Management (BBSM)* (e.g. Network Manager or NM) *for managing the status of the base station* (see at least column 4 lines 8-14),
- *a Block of Digital unit Control and management (BDCC)* (e.g. Operation and Maintenance System or OMS) *for controlling and managing digital units* (see at least column 4 lines 30-38) *and*
- *a Block of RF Control (BRFC)* (e.g. base station controller or BSC) *for automatically setting a RF frequency* (see at least column 4 lines 22-24),
- *said method comprising the steps of:*
  - *requesting RF configuration data* (e.g. by sending NM the base station's capability information) *from the BRFC to the BDCC when the base station is initialized* (see at least column 5 lines 29-37);
  - *requesting RF configuration data from the BDCC to the BBSM* (see at least column 5 lines 29-37, where Niska discloses the capability information e.g. request is sent via OMS);
  - *upon receiving the request for RF configuration data by the BBSM, reading a frequency configuration information from a PLD* (e.g. abstract resource information model e.g. ARIM), *which defines the frequency configuration information* (see at least column 5 lines 40-55);
  - *transmitting the frequency configuration information* (e.g. configuration information) *to the BRFC via the BDCC* (see at least Figure 3 column 5 lines 4-8, column 7 lines 42-45 and column 8 lines 1-5);

          o *and setting the frequency of the base station on the basis of the frequency*

              configuration information transmitted from the BRFC (see at least

              column 7 lines 49-50).

Regarding **claim 3**, Niska discloses the limitations as shown in the rejection of **claim 1**.

Niska further suggests the following limitations *wherein the **BDCC*** (e.g. OMS, see at

least column 4 lines 30-38 where Niska discloses the OMS as a bridge between the

network manger and the base station controller) ***performs*** *the operations comprising*

the steps of:

- *checking whether a RF information request signal transmitted from the BRFC is*

     received (Niska may have not explicitly disclosed *checking whether an initial RF*

     information request is transmitted from the BRFC, Niska however teaches

     receiving via OMS an initial RF information request (e.g. capability information of

     a BS when it's first added to the network from a base station controller, see as

     least column 4 lines 30-38 and column 5 lines 29-38). It would have been

     obvious to a person of ordinary skill in the art to check whether the initial RF

     information request is received in order to further process the information in the

     manner disclosed by Niska)*;*

- *as a result of said checking, if the RF information request signal transmitted from*

     the BRFC is received, modifying the signal structure of the RF information

     request signal to transmit the RF information request signal to the BBSM (Niska

     may have not explicitly disclosed modifying the signal structure of the RF

     information request signal e.g. the capability information of the base station.

However, it is obvious to a person of ordinary skill when signal structure are often

modified (e.g. parsed and repackaged as a frame) in order to support the

transmission of signal via a particular physical interface (e.g. RS-232 etc.)

belonging to a particular system component);

- *transmitting the modified RF information request signal to the BBSM* (see at least

  column 7 lines 30-34);

- *as a result of said checking, if the RF information request signal is not generated*

  from the BRFC, determining whether a RF information response (e.g.

  configuration information) *signal transmitted from the BBSM is received* (see at

  least column 7 lines 39-45);

- *as a result of said determining, if the RF information response signal is received,*

  modifying the signal structure of the RF information response signal to transmit

  the RF information response signal to the BRFC (see at least column 4 lines 30-

  38, and the Examiner's explanation on "modifying the signal structure" addressed

  above);

- *and transmitting the modified RF information response signal to the BRFC* (see

  at least column 4 lines 30-38 and column 7 lines 43-46).

Regarding **claim 5**, Niska discloses *a method for automatically setting a frequency of a*

base station in a CDMA-2000 system, the system comprising

- *a BBSM* (e.g. network manager) *for managing the status of the base station*

  (see at least column 4 lines 8-14),

- *a BDCC* (e.g. Operation and Maintenance System or OMS) *for controlling and managing digital units* (see at least column 4 lines 30-38) *and*

- *a BRFC* (e.g. base station controller or BSC) *for automatically setting a RF frequency* (see at least column 4 lines 22-24),

- *said method comprising the steps of:*

  - *if an operator requests changing a RF configuration data, reading by the BBSM a frequency configuration information from a PLD* (e.g. abstract resource model information) *that defines the frequency configuration information and transmitting the frequency configuration information to the BDCC* (see at least column 7 lines 30-43, column 8 lines 1-5);

  - *transmitting the RF configuration data* (e.g. configuration information) *from the BDCC to BRFC* (see at least column 7 lines 42-45);

  - *and setting the frequency of the base station on the basis of the frequency configuration information received in the BRFC* (see at least column 7 lines 49-50).

5. **Claims 2,4** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Niska in view of US 6470195 B1 Meyer (hereinafter Meyer).

Regarding **claim 2**, Niska discloses the limitations as shown in the rejection of claim **1**. Niska further suggests the following limitations *wherein the BBSM* (e.g. Network Manager) *performs the operation comprising the steps of:*

- *checking whether an initial RF information request is generated from the BRFC* (Niska may have not explicitly disclosed *checking whether an initial RF*

> *information request is generated from the BRFC,* Niska however teaches
> receiving by the Network Manger an initial RF information request (e.g. capability
> information of a BS when it's first added to the network from a base station
> controller, see as least column 5 lines 29-38). It would have been obvious to a
> person of ordinary skill in the art to check whether the initial RF information
> request is received in order to further process the information in the manner
> disclosed by Niska)*;*

- *as a result of said checking, if the initial RF information request is generated,
  reading a RF-related PLD* (see at least column 7 lines 33-39)*;*

- *extracting a RF frequency interval value* (i.e. frequency spectrum) *and RF
  frequency* (e.g. as indicated in the frequency spectrum) *from the read PLD and
  storing* (e.g. stored as abstract resource model information) *them* (see at least
  column 7 lines 33-39, column 8 lines 1-9)*;*

- *as a result of said checking, if the initial RF information request is not generated,
  identifying whether there is a request for changing* (modifying) *a RF frequency
  information* (see at least column 5 lines 1-12 and 50-55, where Niska discloses
  adding or modifying a base station)*;*

- *as a result of said identifying, if there is the request for changing the RF
  frequency information, storing* (e.g. stored as abstract resource model
  information) *the RF frequency interval value* (i.e. frequency spectrum) *and the RF
  frequency that an operator* (i.e. network manager) *inputs* (see at least column 5
  lines 1-12, column 7 lines 33-39 and column 8 lines 1-9)*;*

- *obtaining a CDMA channel depending on a FA of the base station after the RF frequency is stored* (see at least column 6 lines 20-29 and 37-42, where Niska discloses base station configuration attributes including channel specific attributes e.g. frequency assignment);

Niska does not specifically disclose *storing attenuation values of receipt (Rx)/transmission (Tx) per sectors*. Niska however discloses communicating (thereby storing) to the network manager capability information of a base station including radio near part attributes (see at least column 6 lines 26-30). In a related art, Meyer teaches impact of attenuation per sectors (see at least Meyer column 9 lines 1-22). It would have been obvious to a person of ordinary skill in the art to modify Niska in view of Meyer to store attenuation values of receipt RX/Tx per sector in order to properly configure the base station to support quality phone call.

Niska further discloses:

- *and transmitting the RF information obtained from the PLD to the BDCC* (e.g. OMS) (see at least Figure 3 column 4 lines 29-34, column 7 lines 40-45).

Regarding **claim 4**, Niska discloses the limitations as shown in the rejection of **claim 1**. Niska further suggests *wherein the **BRFC performs** the operations comprising the steps of:*

- *transmitting a RF information request message* (e.g. capability information of a base station) *to the BDCC* (see at least column 4 lines 30-38 and column 5 lines 30-38);

- *checking whether a RF information message* (e.g. configuration information, see

  at least column 7 lines 39-45) *is received from the BDCC* (Niska may have not

  explicitly disclosed *checking whether the configuration information is received*

  from the BDCC, however, it would have been obvious to a person of ordinary skill

  in the art to check whether the configuration information is received in order to

  further process the information in the manner disclosed by Niska).

Niska is silent as to a checksum and therefore fails to disclose the limitations: *as a*

result of said checking, if the RF information message is received, identifying a

checksum of the received message. However, checksum is a scheme commonly known

in the art used to identify and prevent transmission error between system components.

Therefore, a person of ordinary skill in the art would have known to modify Niska by

incorporating a checksum.

Niska is silent as to an EEPROM and therefore fails to disclose *determining whether the*

identified checksum is different from a value currently stored in an EEPROM. However,

EEPROM is also commonly known in the art as a widely available storage device.

Therefore, a person of ordinary skill in the art would have known to modify Niska by

incorporating an EEPROM as the storage device.

Niska is further silent as to *if the identified checksum is identical to the value currently*

stored in the EEPROM, finishing the operations for automatically setting a frequency of

a base station; if the identified checksum is different from the value currently stored in

the EEPROM, replacing the value stored in the EEPROM with the received value and

storing the received vale in the EEPROM. However, it would have been obvious to a

person of ordinary skill in the art to judge whether or not a configuration change is

needed via identifying configuration parameters included in the configuration information

(e.g. transmitted via a checksum scheme and stored in the EEPROM) in order to

proceed with further processing (e.g. configuring the base station as taught by Niska) of

the configuration information.

Niska further discloses *setting the frequency of the base station correspondently to the*

replaced and stored value (see at least column 7 lines 49-50);

Niska does not specifically disclose *setting attenuation values to be used at the base*

station after the frequency of the base station is set. In a related art, Meyer teaches

impact of attenuation (see at least Meyer column 9 lines 1-22). It would have been

obvious to a person of ordinary skill in the art to modify Niska in view of Meyer to set

attenuation values in order to properly configure the base station to support quality

phone call.

Niska does not specifically disclose *setting a PLL to be used in the base station.*

However, a PLL (phase-lock loop) is a commonly known component used in almost all

transceivers to support the transmission and reception of signals at a certain locked

frequency. Therefore, it would have been obvious to a person of ordinary skill in the art

to incorporate a PLL setting in order to properly transmit and receive at a desired

frequency channel.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

US 20040204097 A1 Scheinert et al. describes at least in part, a method of configuring a base station.

US 6587448 B1 B1 Dajer et al. describes a reconfigurable base station operable under multiple cellular standards.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to YU (Andy) GU whose telephone number is (571)270-7233. The examiner can normally be reached on Mon-Thur 8:30-5:30.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on 5712727922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YU (Andy) GU/
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617